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(75) Abstract: Arrays, probes and methods are disclosed for the construction and interrogation of DNA arrays containing genomic functional sites, and thereby active genetic regulatory sequences. Further methods are disclosed for interrogation of such arrays in order to reveal the pattern of genetic functional and regulatory activity within any given cell(s) or tissue type(s) or associated with functional sites, and thereby active genetic regulatory sequences. Further methods are disclosed for interrogation of such arrays in order to reveal the pattern of genetic functional and regulatory activity within any given cell(s) or tissue type(s) or associated with any particular genetic locus or combination of loci under a variety of conditions.